PROJECT DESCRIPTION

I. GENERAL

This project invoives the installation of a new traffic control signal at the intersection of MD 140 (Reisterstown Road) and Wal-Mart/Sam's Club & R-H Toyota Entrance's in Baltimore County, Maryland. MD 140 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA 6 (six) phase, full-traffic-actuated mode. There will be an exclusive/permissive left turn phase for both the north and southbound movements of MD 140. The MD 140 through movements will operate concurrently. The Wal-Mart/Sam's & R-H Toyota Entrance's movements will operate in a side street split phase mode.

An eight phase, full-traffic-actuated, solid state digital controller with telemetry interconnect, battery back-up, one (1) four-channel rack mounted time delay output loop detector amplifier, and video detection equipment housed in a base mounted cabinet are to be installed at this location.

CONTACT LIST

The contact persons for District #4 are as follows:

Mr. Randall Scott
Assistant District Engineer - Traffic
410-321-2781

Mr. Joe McMahon
Assistant District Engineer - Utility
410-321-2841

Mr. Dave Ramsey
Assistant District Engineer - Maintenance
410-321-2761

Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

The Power Company Representative is:
Baltimore Gas and Electric Company
Mr. Keith Mayle
7317 Parkway Drive South
Hanover, Maryland 21076
410-859-9070

EQUIPMENT LIST

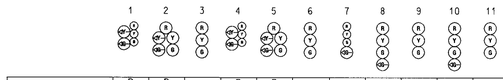
A. Approved S.H.A. equipment to be purchased by the Developer and installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
2	EA	818	27 ft. steel twin mast arm pole with 50 ft. and 70 ft. mast arms.
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet with telemetry interconnect, battery back-up, one (1) four-channel rack mounted time delay output loop detector amplifier, and video detection equipment (Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650).
2	EA	---	Video Detection Camera and Cable (400 LF).
4	EA	814	12 in., one-way, three section (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, four section (R,Y,G,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	814	8 in./12 in., one-way, four section (8 in. R,Y,G/ 12 in. GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, five section (R,Y,YA,G,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in./8 in., one-way, five section (12 in. YA, GA/ 8 in. R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	813	30 in. x 36 in. R 3-5(R) sign with mast arm mounting hardware.
1	EA	813	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
1	EA	813	30 in. x 36 in. R 3-6(L) sign with mast arm mounting hardware.
2	EA	813	36 in. x 42 in. R 10-12 sign with mast arm mounting hardware.
1	EA	813	24 in. x 96 in. M 95-1 sign with mast arm mounting hardware.
2	EA	813	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.
4	EA	---	Micro-loop probe (set of 3) with lead-in cable: 2 - 500 ft. 2 - 750 ft.
2	EA	806	15 ft. luminaire arm.
2	EA	806	250 W H.P.S. lamp and luminaries.

B. Equipment to be furnished and/or installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

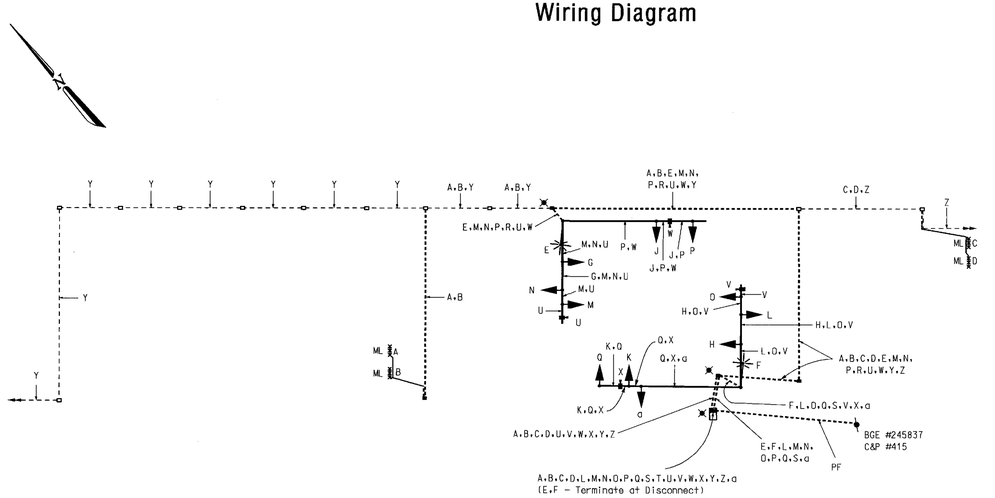
Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
3	CY	205	Test pit excavation.
4	EA	811	Handhole.
60	LF	815	Sawcut or signal loop detector.
425	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
120	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
1500	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
1650	LF	810	12-pair jelly-filled telemetry interconnect cable (No. 19 A.W.G.).
25	LF	810	3-wire (No. 4 A.W.G.) electrical cable.
300	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
15	LF	805	1 in. liquid tight flexible conduit for loop detector lead-in.
80	LF	805	2 in. polyvinyl chloride (Schedule 80) electrical conduit - slotted in roadway.
30	LF	805	3 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
200	LF	805	4 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
40	LF	805	4 in. polyvinyl chloride (Schedule 80) electrical conduit - bored.
80	LF	805	4 in. polyvinyl chloride (Schedule 80) electrical conduit - slotted in roadway.
10.55	CY	801	Concrete foundation for traffic signal equipment.
3	EA	804	Ground rod - ¾ in. diameter x 10 ft. length.
1	EA	807	Control and distribution equipment (120/240 V, one phase, three wire system for a MD-SHA type B-10 underground electrical service.
140	EA	556	24 in. wide HAPPTPM white for stop line.
72	LF	812	4 in. x 6 in. wood sign support.
2	EA	---	Cut, clean, cap mast arm.
Lump Sum	LS	---	Relocate existing interconnect Cable (Approx. 150 LF).
Lump Sum	LS	---	As-built for S.H.A. (on CADD).

Phase Chart



	1	2	3	4	5	6	7	8	9	10	11	
Phase 1 & 5	R, ◄G	R, ◄G	R	R, ◄G	R, ◄G	R	R	R	R	R	R	
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6												
Phase 1 & 6	R	R	R	G, ◄G	G, ◄G	G	R	R	R	R	R	
1 Change	R	R	R	G, ◄Y	G, ◄Y	G	R	R	R	R	R	
Phase 2 & 5	G, ◄G	G, ◄G	G	R	R	R	R	R	R	R	R	
5 Change	G, ◄Y	G, ◄Y	G	R	R	R	R	R	R	R	R	
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	
Phase 3	R	R	R	R	R	R	R	R	R	G, ◄G	G	
3 Change	R	R	R	R	R	R	R	R	R	Y	Y	
Phase 4	R	R	R	R	R	R	G, ◄G	G, ◄G	G	R	R	
4 Change	R	R	R	R	R	R	Y	Y	Y	R	R	
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	

Wiring Diagram



A, B, C, D — Micro-loop Detector Lead-in Cable

E, F — 2-Conductor Tray Cable (No. 12 A.W.G.)

G, H, J, K — 5-Conductor Electrical Cable (No. 14 A.W.G.)

a — L, M, N, O, P, Q — 7-Conductor Electrical Cable (No. 14 A.W.G.)

R, S — Bare Copper Ground Wire (No. 6 A.W.G.)

T — 3-Wire (No. 4 A.W.G.) for Traffic Signal Electrical Service

U, V, W, X — Video Detector Camera Cable (per manufacture specifications)

Y — 12-Pair Voice Grade Telemetry Interconnect Cable (No. 19 A.W.G.) (Home Depot to Wal-Mart Entr. Run)

Z — Existing Interconnect Cable (Wal-Mart Entr. to Valley Centre Entr. Run)

PF — Proposed Underground Electrical Service by BGE

Proposed Grounding Rod

ML — Micro-loop Detector

The Traffic Group
The Traffic Group, Inc.
410-931-6600
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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information Plan)
MD 140 (Reisterstown Road) at Wal-Mart/Sam's Club Entr.

DRAWN BY: F. Brownley	F.A.P. NO. N/A	TS NO. 4149	SHEET NO. 2 OF 4
CHECKED BY:	S.H.A. NO. BW996M82		
SCALE: N/A	COUNTY: Baltimore	T.I.M.S. NO. E-779	
DATE: January 7, 2002	LOG MILE:		

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